SECTION VII.—WEATHER AND DATA FOR THE MONTH.

THE WEATHER OF THE MONTH.

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Pressure.—The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing directions of the winds, are graphically shown on Chart VII, while the average values for the month at the several stations, with the departures from the normal, are shown in Tables I and III.

For the month as a whole the barometric pressure was high over all sections east of the Rocky Mountains, except in Montana, the northern portions of North Dakota and Minnesota, and in the Canadian Provinces from the upper Lake region westward. The most marked positive departures occurred in the central valleys and in Maine and the Canadian Provinces to the northeastward, the departures being rather marked in the latter region. Over all other portions of the country the means for the month were below the normal, except the western portion of the State of Washington, where they were near or slightly above, the greatest negative departures appearing in central California, northwestern Nevada, southern Idaho, western Montana, and the eastern Rocky Mountain slope of the Canadian Provinces.

The month opened with relatively high pressure over all districts, except the New England States and the north Pacific slope, where moderately low pressure prevailed. During the first decade a succession of low and high pressure areas followed each other across the country with moderate movement but rather marked regularity. Early in the second decade a rather extensive high pressure area enveloped the greater part of the country east of the Rocky Mountains, which was accompanied by generally fair weather. These conditions continued until near the end of the decade when they were replaced by generally low pressure in nearly all sections. During the third decade, relatively low pressure prevailed over the greater part of the country much of the time and was accompanied by frequent showers. The month closed with an area of low pressure extending from the Lake region to the South Atlantic States, and another extensive and rather marked low area covering the Rocky Mountain region and westward to the Pacific. Elsewhere the pressure was near the normal.

The distribution of the highs and the lows was generally favorable for southerly and southeasterly winds over the west Gulf States, the Mississippi Valley and the southern portion of the Plains States, and southerly and southwesterly over the Ohio Valley and the southwestern portion of the Lake region. Elsewhere variable winds prevailed.

Temperature.—During the first few days of April the temperature was unseasonably low throughout eastern and southern districts, with frosts in most parts of the east Gulf and South Atlantic States, but west of the Rocky Mountains the weather continued considerably warmer than usual for the season of the year.

As the first week advanced the weather became warmer generally over eastern districts, and by the middle temperatures were high for the season in those sections, but at the same time they had become relatively low over the Rocky Mountain and Plateau regions of the West. However, by the close of the week temperatures had fallen considerably in the upper Mississippi and Ohio Valleys, the region of the Great Lakes, and over the Middle Atlantic States, with a general tendency to cooler weather over eastern districts, but with somewhat warmer from the Rocky Mountains westward.

For the week as a whole the average temperatures were above the normal in all portions of the country, except small districts in the southern Rocky Mountain region and extreme South. In the middle Mississippi and lower Ohio Valleys and portions of the Lake region and Northeastern States the averages were from 8° to 10° above the weekly normal.

During the early part of the second week frosts were reported from points in the Ohio Valley and Middle Atlantic States. In other portions of the country there was a tendency to higher temperatures, except in the far West, where it was somewhat cooler. By the middle of the week temperatures had risen to near or above the normal in all portions of the country, and in the Plains States and Northwest the weather had become decidedly warm, and continued unusually warm over the northern districts to eastward of the Rocky Mountains at the close of the week.

The week as a whole was unusually warm in the central valleys and Northwest, especially in the Dakotas and Montana, where the averages ranged from 15° to 20° above the normal. The week was moderately warm over the North Atlantic States and in all districts to westward of the Rocky Mountains. It was slightly cooler than the average from the lower Lake region southward to the Atlantic coast, and over the Florida Peninsula, western Texas, and portions of New Mexico.

During the latter part of the week, at points in the Lake region and along the middle Gulf coast, temperatures equaled or exceeded any previously reported during the past 40 years in those regions for the same period.

The weather continued warm at the beginning of the third week in practically all portions of the country, and especially so in the Ohio Valley and to the eastward, but by the middle of the week decidedly cooler weather overspread the Northeastern States, and temperatures nearly 10° below freezing were reported from exposed points in the interior of New England. Cooler weather had also advanced into the far Northwest, but in other portions of the country temperatures continued high. During the latter part of the week warm weather became general from the Mississippi Valley to the Atlantic coast, but it continued cool to westward of the Rocky Mountains.

For the week as a whole the average temperatures were abnormally high in the Lake region, central valleys, and most eastern districts, and they continued slightly below the normal over most of the Pacific coast region. The maximum temperatures over much of the Lake region and the Ohio Valley and eastward to the Atlantic coast during the early part of the week were in many cases the highest ever recorded during April in those regions.

The fourth week opened with continued warm weather in the great central valleys, but in the Northeastern States cooler weather had developed and there was a

tendency to lower temperature in the Northwest, and it continued cool over the Pacific Coast States. As the week advanced cooler weather overspread the central valleys and by the end temperatures had become nearly normal in all districts to eastward of the Rocky Mountains. In the far West the weather had become unsettled, and by the middle of the week severe cold for the season of the year had overspread portions of the Plateau region and snow was falling from southern Idaho to northern Arizona. During the latter part of the week there was a tendency to cooler weather in all eastern districts, while in the far West abnormally low temperatures continued, especially in the Plateau region, where in some portions they were below 10°, a most unusual occurrence so late in the spring.

The average temperature for the week as a whole was above the normal over all districts to eastward of the Rocky Mountains, except along the New England coast, and it was decidedly warm over the Central and Southern States and at a few points in the Lake region. West of the Rocky Mountains it was decidedly cold, especially in the far Southwest, where the average ranged from 10° to 14° below the normal.

Precipitation.—The month opened with a general deficiency in soil moisture from the Mississippi Valley eastward, and in portions of Texas, the greater part of the Plateau region, and in the far Northwest, the deficiency being most marked in the Ohio Valley, where the fall from January 1 to April 30 was in many cases but little more than one-half the normal, and similar conditions prevailed in portions of Montana and North Dakota. In the Plains States and Southwest, however, the amount of moisture was unusually large.

During the first few days of April a rain and snow area moved northward along the Atlantic seaboard from Florida to New England, but its influence did not extend far inland, and the precipitation, mostly snow and unusually heavy for the season of the year, was confined to a narrow belt along the coast. About the middle of the week unsettled weather with local rains set in over the western Plateau region, and moved slowly eastward, accompanied by some heavy local falls in the Rocky Mountain and Plains regions, and moderate to light showers over central and northern districts to the eastward.

Generally fair weather prevailed throughout the greater part of the second week in nearly all districts, except early in the week showers occurred in the central part of the Plateau and Mountain districts, some heavy falls occurring in portions of New Mexico and western Texas, where rainy conditions prevailed for several days, and during the latter part of the week some local heavy rains occurred in portions of the West Gulf States. The total precipitation for the week was greatly deficient, many large areas in the Atlantic and Gulf States, Ohio Valley, and Plains States being without rain during the entire period. In marked contrast the fall in the southern portion of the Plains region and in the Southwest was unusually large.

During the third week local rains, in some cases remarkably heavy, were of daily occurrence over considerable areas of the Plains States and Southwest. Heavy rains set in over portions of Texas and Oklahoma early in the week, extending as light showers by the middle of the week into portions of the middle and lower Mississippi and Ohio Valleys, while local showers occurred in the Rocky Mountain region and far Southwest, and rains became fairly general in the Great Plains region with some unusually heavy falls. During the latter part of the week heavy rains again occurred in portions of the Plains States and Texas, and at the close of the week there were local showers in the upper Mississippi Valley, northern New England and the far Southwest. For the week as a whole the precipitation was far in excess of the average in the central and southern portions of the Great Plains and over much of the west Gulf District and in the Southwest, and there was sufficient rain for the time being in large portions of the Mississippi and Ohio Valleys and in the Mountain and Plateau regions of the West, but over the middle and east Gulf and Atlantic Coast States and much of the Lake region there was no appreciable precipitation during the week.

Local showers occurred during the first few days of the fourth week in the Lake region and over the more eastern districts, but there was little rain in the interior and western portions of the country. During the latter part of the week unsettled weather with rain or snow prevailed very generally throughout the Mountain and Plateau regions extending into Texas and the Southwest, with some heavy rains in west-central Texas and over the eastern districts of Oregon and Washington. These unsettled conditions moved slowly eastward with more or less precipitation over wide areas. Snow occurred over considerable areas in the Plateau and Mountain regions of the West, the fall exceeding 12 inches at Tonopah, Nev., and doubtless much more fell at the higher elevations. By the end of the week local showers, mostly light, had occurred over considerable areas in the Ohio Valley and eastward to the Atlantic coast, and from the Lake region westward to the Missouri Valley. The total precipitation for the week, while not large was generally ample in all sections to the westward of the Mississippi, while to the eastward the amounts were deficient, and in many small areas the fall was too light to afford any material relief from the drought that had prevailed for the past two months.

GENERAL SUMMARY.

The weather of the month was characterized by generous precipitation in the Southwest, especially in Oklahoma and Texas, and the absence of appreciable precipitation in nearly all districts from the Mississippi eastward, and over the greater part of the Plateau region and the far Northwest until near the end of the month when moderate rainfall somewhat relieved the droughty conditions which had continued for the past two months in these districts, except that in many small areas east of the Mississippi the fall was too small to furnish any appreciable relief.

Likewise the high temperatures that occurred during the second decade in the Lake region, Ohio Valley and eastward to the Atlantic and along the middle Gulf coast were unusual, some of the highest temperatures ever reported for April in these regions being recorded. In marked contrast during the latter part of the month unusually cold weather with heavy snow occurred in portions of the Plateau and Rocky Mountain regions, the average temperature in the far Southwest during the last week ranging from 10° to 14° below the normal, a most unusual departure for the season of the year in that district where temperature changes are usually much less pronounced than in the districts to the northward.

Average accumulated departures for April, 1915.

Districts.	Temperature.			Precipitation.			Cloudiness.		Relative humidity.	
	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure from the normal.	General mean for the current month.	Departure from the normal.
	°F.	°F.	°F.	Ins.	Ins.	Ins.	0—10		P. ct.	
New England	47.8	+ 4.2	+12.4	1.99	−1.10	−2.30	6.0	+0.5	73	0
Middle Atlantic	55.7	+ 5.2	+ 9.8	1.90	−1.20	−1.30	4.7	−0.5	65	− 2
South Atlantic	62.7	+ 1.4	− 3.2	1.59	−1.80	−4.00	3.4	−1.2	69	− 3
Florida Peninsula	70.1	− 3.3	−13.5	1.34	−0.60	+2.40	3.6	−0.2	72	− 2
East Gulf	66.1	+ 1.5	− 7.8	0.54	−3.50	−5.00	3.6	−1.3	65	− 5
West Gulf	66.3	+ 0.5	− 6.3	0.23	+2.70	+1.30	6.4	+1.3	76	+ 4
Ohio Valley and Tennessee	59.5	+ 4.8	+ 2.3	1.20	−2.40	−5.90	4.6	−0.7	66	− 5
Lower Lakes	51.1	+ 5.9	+ 8.1	0.77	−1.60	−3.00	5.2	−0.5	67	− 3
Upper Lakes	48.9	+ 8.1	+16.5	1.03	−1.30	−2.60	5.3	−0.2	71	− 2
North Dakota	50.8	+10.1	+26.1	0.99	−0.90	−2.00	4.9	−0.4	64	− 4
Upper Mississippi Valley	58.8	+ 8.3	+13.2	1.48	−1.50	−1.90	4.7	−0.5	63	− 5
Missouri Valley	58.6	+ 8.2	+ 9.7	2.45	−0.40	+1.40	4.6	−1.0	67	+ 2
Northern slope	51.3	+ 8.5	+14.3	2.10	+0.50	−0.20	5.2	+0.1	62	+ 4
Middle slope	57.8	+ 4.1	+ 3.4	3.71	+1.50	+3.00	5.6	+1.0	67	+10
Southern slope	61.6	− 0.8	− 7.3	5.64	+4.00	+4.70	5.5	+0.8	67	+12
Southern Plateau	57.0	− 0.8	− 8.7	1.28	+0.90	+1.90	3.8	+1.0	49	+19
Middle Plateau	52.3	+ 3.4	+ 2.4	1.93	+0.80	+0.30	5.7	+1.2	56	+11
Northern Plateau	53.9	+ 5.0	+16.0	1.62	+0.20	−0.90	5.5	+0.3	55	− 2
North Pacific	51.6	+ 3.2	+13.5	2.70	−0.60	−5.30	5.3	−0.4	77	+ 6
Middle Pacific	55.1	+ 1.6	+ 5.8	1.06	−1.00	+3.50	5.8	+1.4	73	+ 1
South Pacific	59.0	+ 1.0	+ 7.9	1.31	+0.30	+3.60	6.0	+2.0	75	+ 7

Maximum wind velocities, April, 1915.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
		Mi./hr.				Mi./hr.	
Block Island, R. I.	3	65	ne.	North Head, Wash.	30	54	nw.
Do	4	56	n.	Pittsburgh, Pa.	11	53	w.
Buffalo, N. Y.	10	52	sw.	Point Reyes Light,			
Columbus, Ohio	11	50	w.	Cal.	3	60	nw.
Corpus Christi, Tex.	30	50	se.	Do	4	75	nw.
Duluth, Minn.	29	52	w.	Do	5	62	nw.
Erie, Pa.	11	60	sw.	Do	7	50	nw.
Do	12	50	w.	Do	12	56	nw.
Eureka, Cal.	29	58	n.	Do	13	76	nw.
Galveston, Tex.	23	61	se.	Do	14	52	nw.
Hatteras, N. C.	3	50	ne.	Do	21	57	nw.
Houston, Tex.	23	54	se.	Do	22	53	nw.
Modena, Utah	21	56	s.	Do	29	110	nw.
Mt. Tamalpais, Cal.	4	68	nw.	Do	30	94	nw.
Do	12	50	nw.	Roswell, N. Mex.	16	60	se.
Do	13	64	n.	St. Louis, Mo.	8	50	s.
Do	14	62	n.	Salt Lake City, Utah.	3	56	nw.
Do	29	64	nw.	San Antonio, Tex.	18	58	se.
Do	30	64	nw.	Sand Key, Fla.	3	50	nw.
Nantucket, Mass.	3	79	ne.	Sandy Hook, N. J.	3	62	nw.
Do	4	54	ne.	Do	4	52	nw.
New York, N. Y.	3	62	ne.	Do	11	66	s.
Do	4	60	n.	Do	27	50	w.
Do	11	70	sw.	Tatoosh Island,			
Do	27	69	nw.	Wash.	7	79	sw.
Norfolk, Va.	3	62	ne.	Do	29	52	w.
North Head, Wash.	1	54	se.	Toledo, Ohio	11	50	sw.
Do	7	58	se.	Trenton, N. J.	3	52	ne.
Do	28	54	nw.	Do	20	50	w.
Do	29	68	nw.				